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Serial No. 10/051,793

IN THE CLAIMS

In accordance with the **REVISED AMENDMENT FORMAT** and waiver of 37 CFR §1.121, as promulgated by order of Stephen Kunin, Deputy Commissioner for Patent Examination Policy, on January 31, 2003, the entire set of presently pending claims has been reproduced below in the approved revised amendment format. No separate marked-up copy of the amended claims has been provided.

Please amend claims 2, 3, 4, 5, 6 and 21 as follows.
Please also add new claims 26-33.

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1. (Original) A receiver circuit comprising:

a light detector arranged to provide an output signal that varies based upon the intensity of light measured thereby;

a constant bias circuit arranged to supply a reverse voltage across said light detector, said reverse voltage remaining substantially constant irrespective of said output signal;

a signal filter coupled to said light detector arranged to filter said output signal; and;

an amplifier arranged to amplify said output signal filtered by said signal filter.

2. (Presently Amended) A receiver circuit comprising:

a photocell having a cathode and an anode, said anode coupled to ground potential, said photocell arranged to provide a photocell output signal that varies based upon a measured intensity of light;

a constant bias circuit including a first operational amplifier having:

a non-inverting input coupled to a first reference voltage;

an inverting input coupled to said cathode of said photocell;

an output; and,

a filter circuit connected between said inverting input and said output, said filter circuit configured to filter at least a portion of said photocell output signal; and,

an amplifier coupled to said cathode by a first capacitor.

3. (Presently Amended) A receiver circuit according to claim 2, wherein said filter circuit comprises a low pass filter.

4. (Presently Amended) A receiver circuit according to claim 2, wherein said filter circuit comprises an inductor connected between said inverting input and said output defining a negative feedback loop.

5. (Presently Amended) A receiver circuit according to claim 4, ~~wherein said first operational amplifier~~ further comprisesing a second capacitor in parallel with said inductor in said negative feedback loop of said first operational amplifier.

6. (Presently Amended) A receiver circuit according to claim 2, wherein said amplifier comprises a second operational amplifier having an inverting input coupled to the cathode of said photocell by said first capacitor, and a resistor in a negative feedback configuration.

7. (Original) A receiver circuit according to claim 2, wherein said first reference voltage coupled to said non-inverting input of said first operational amplifier is set to a voltage between zero volts, and a positive rail voltage that supplies power to said first operational amplifier.

8. (Original) A receiver circuit according to claim 2, wherein said photocell is arranged to detect light within a predetermined frequency range, and said filter circuit comprises

a filter circuit configured to filter said photocell output signal outside said predetermined frequency range.

9. (Original) A receiver circuit according to claim 2, wherein said photocell output signal varies in proportion to the intensity of light impinging upon said photocell.

10. (Original) A receiver circuit according to claim 9, wherein said photocell is configured to detect amplitude variations in light impinging upon said photocell, whose amplitude variations have spectral frequencies within a predetermined frequency range, and said filter circuit comprises a filter circuit configured to attenuate said photocell output signal outside said predetermined frequency range.

11. (Original) A receiver circuit according to claim 2, wherein said filter circuit is configured to filter signals arising from ambient conditions of daylight in said photocell output signal such that said signals arising from ambient conditions of daylight are substantially attenuated from said amplifier output signal.

12. (Original) A receiver circuit according to claim 2, wherein said filter circuit is configured to substantially attenuate said photocell output signal where said photocell output signal comprises spectral frequencies that are less than 10 Hertz, and said filter circuit is configured to not substantially attenuate said photocell output signal where said photocell output signal comprises spectral frequencies above 50 Hertz.

13. (Original) A receiver circuit comprising:

a light detector arranged to provide an output signal based upon the intensity of detected light;

a first variable impedance load coupled to said light detector arranged to provide a low impedance load when said output signal comprises a signal of no interest, and provide a high impedance load when said output signal comprises a signal of interest;

a second variable impedance load coupled to said light detector arranged to provide a high impedance load when said output signal comprises said signal of no interest, and provide a low impedance load when said output signal comprises said signal of interest; and,

an amplifier arranged to amplify said output signal.

14. (Original) A receiver circuit according to claim 13, wherein said first variable impedance load comprises an operational amplifier having an inductive load in a feedback loop between an output of said operational amplifier and an input of said operational amplifier, and said light detector is coupled to said input of said operational amplifier.

15. (Original) A receiver circuit according to claim 13, wherein said second variable impedance load comprises a capacitor serially connected between said light detector and said amplifier.

16. (Original) A receiver circuit according to claim 13, wherein said light detector comprises a photocell having an anode coupled to ground potential, and a cathode coupled to said first and second variable impedance loads, said photocell arranged to provide an output signal that varies in response to the intensity of light impinging thereon.

17. (Original) A receiver circuit according to claim 16, further comprising a constant bias circuit coupled to said photocell wherein said photocell is maintained at a substantially constant reverse voltage by said constant bias circuit irrespective of the value of said output signal generated by said photocell.

18. (Original) A receiver circuit according to claim 17, wherein said constant bias circuit comprises an operational amplifier having a non-inverting input coupled to a bias voltage, and a non-inverting input coupled to said cathode of said photocell.

19. (Original) A receiver circuit according to claim 18, wherein said first variable impedance load comprises an inductor in a negative feedback loop between said inverting input and an output of said operational amplifier.

20. (Original) A receiver circuit according to claim 13, wherein said output signal of said light detector is proportional to the intensity of light impinging thereon.

21. (Presently Amended) A receiver circuit comprising:

a photocell having a cathode and an anode, said anode coupled to ground potential;

a constant bias circuit arranged to supply a reverse voltage across said photocell, said reverse voltage remaining substantially constant irrespective of said output signal, said constant bias circuit including:

a first operational amplifier having:

a non-inverting input coupled to a first reference voltage; and

an inverting input coupled to said cathode of said photocell; ~~and,~~

a first signal filter defined by an output coupled to said inverting input of said first operational amplifier by a negative feedback loop, said negative feedback loop comprising an inductor;

a second operational amplifier having:

a non-inverting input coupled to a second reference voltage;

an inverting input; and,

an output coupled to said inverting input by a resistor; and,

a capacitor coupling said inverting input of said second operational amplifier to said cathode of said photocell.

22. (Original) A receiver circuit according to claim 21, further comprising a capacitor in parallel with said inductor in said negative feedback loop.

23. (Original) A receiver circuit comprising:

a light detector arranged to provide an output signal that varies based upon the intensity of light measured thereby;

a constant bias circuit arranged to supply a reverse voltage across said light detector, said reverse voltage remaining substantially constant irrespective of said output signal;

a first variable impedance load coupled to said light detector arranged to attenuate said output signal when said output signal comprises spectral frequencies outside a predetermined frequency range; and;

an amplifier arranged to amplify said output signal.

24. (Original) A receiver circuit according to claim 23, wherein said light detector comprises a capacitance, and said constant bias circuit is configured to maintain said capacitance of said light detector at a substantially constant value.

25. (Original) A receiver circuit according to claim 23, wherein the noise gain of said amplifier remains substantially constant irrespective of said output signal of said light detector.

26. (New) A receiver circuit comprising:

a photocell arranged to provide an output signal that varies based upon the intensity of light measured thereby;

a constant bias circuit arranged to supply a reverse voltage across said photocell, said reverse voltage remaining substantially constant irrespective of said output signal; and

an amplifier arranged to amplify said output signal of said light detector.

27. (New) The receiver circuit according to claim 26, further comprising a plurality of photocells coupled to constant bias circuit.

28. (New) The receiver circuit according to claim 26, further comprising a first filter coupled to said photocell, said first filter implementing a lowpass filter.

29. (New) The receiver circuit according to claim 26, further comprising a first filter coupled to said photocell, said first filter implementing a bandpass filter.

30. (New) The receiver circuit according to claim 26, wherein said constant bias circuit comprises a first operational amplifier having a non-inverting input coupled to a first reference voltage, and an inverting input coupled to said photocell.

31. (New) The receiver circuit according to claim 28, wherein said first reference voltage is filtered by a power supply noise rejection of said first operational amplifier.

32. (New) The receiver circuit according to claim 26, further comprising:

a filter coupled between said photocell and said amplifier configured to filter said output signal to attenuate frequencies outside a range of frequencies defining a signal of interest and substantially allow said signal of interest to couple to said amplifier.

33. (New) The receiver circuit according to claim 26, further comprising:

a first filter coupled to said photocell, said first filter having a frequency response that notches at an expected frequency range of laser light intended to be detected by said photocell; and

a second filter coupled between said photocell and said amplifier configured to filter said output signal to attenuate frequencies below said expected frequency range of laser light.

IN THE ELECTION / RESTRICTION

Claims 1-25 are pending in the present application. The Examiner asserts that the following set forth different inventions:

Species A, as shown in Fig. 2;

Species B, as shown in Fig. 3;

Species C, as shown in Fig. 4; and

Species D, as shown in Fig. 5.